



## Active Project Highlights

March 8, 2019

# **ACTIVE PROJECT HIGHLIGHTS REPORT**

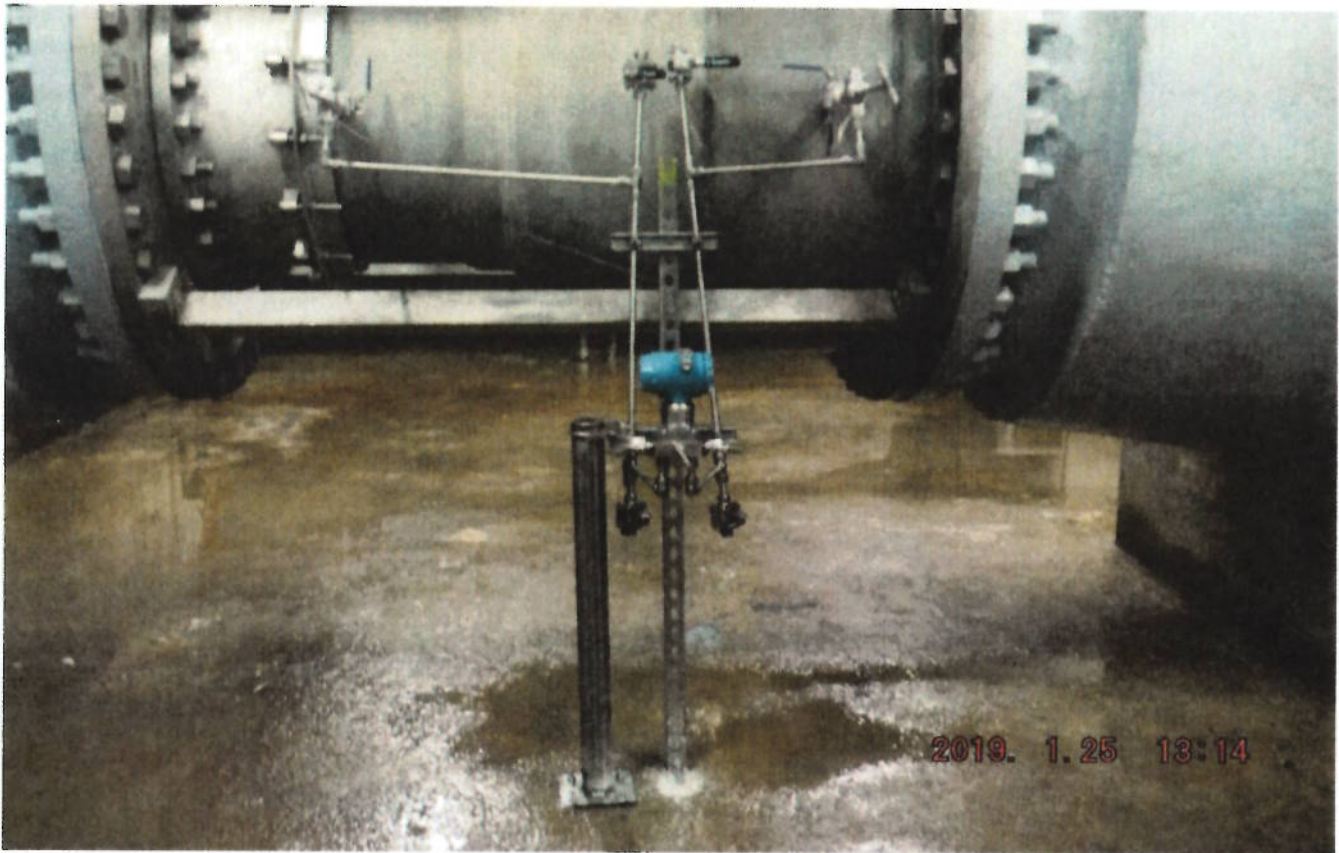
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## Active Project Spotlight

<b>Project Name: Water Plant Production Flow Measurement and Related Facility Improvements</b>		
<b>GLWA Project Manager:</b> <b>Jorge Nicolas</b>	<b>Contractor:</b> LGC Global	<b>Contract Number:</b> <b>CON-133</b>
<b>Project Start Date:</b> <b>7/31/2017</b>	<b>Project Completion Date:</b> <b>7/31/2019</b>	<b>Contract Amount:</b> <b>\$ 6,876,833.00</b>
<b>Invoiced to Date: \$4,607,007.48</b>	<b>Balance Remaining: \$ 2,269,825.52</b>	
<b>CURRENT WORK STATUS</b>		<p>Southwest Water Plant – Installed supports for Hastelloy C-276 impulse pressure sensing tubing at Venturi Meters VM-1 and VM-2.</p> <p>Northeast Water Plant – All four venturi meters and other meter vault improvements are complete. The rehabilitated venturi meters are undergoing the extended field acceptance testing to confirm that they are meeting the specified contract performance requirements.</p> <p>Springwells Water Plant – The 1 ½” electrical conduit inside the high-lift pumping plant header gallery is being installed. The new electrical duct bank is complete and the associated earthwork, including backfilling, compacting, and compaction testing are being performed. Selective demolition work is being conducted to prepare for the new concrete foundation for the Venturi Meter 6 sump pump electrical panel.</p>
<b>PROJECT SCHEDULE</b> (% complete)		67% Elapsed time from Notice to Proceed
<b>PROJECT PROJECTIONS</b>		<p>Northeast Water Plant – Complete calibration of the differential pressure (DP) transmitters that measure the differential pressure across the venturi meters.</p> <p>Complete O&amp;M staff training on the use of the new sump pumps and ventilation equipment.</p>

Springwells Water Plant– Continue with installation of the new electrical duct bank. Install sump pumps and ventilation fan in venturi meter 7. Install control cabinets at venturi meter 7.



**Southwest Plant - Hastelloy C-276 Impulse Tubing and Supports at VM-2**



**Springwells Plant - Removing concrete for VM- 6 Sump Pump Control Panel**

## Active Project Spotlight

<b>Project Name: Water Works Park Chlorine Disinfection System Replacement and Improvements</b>		
<b>GLWA Project Manager:</b> <b>Mike Dunne</b>	<b>Contractor:</b> <b>Detroit Contracting Inc</b>	<b>Contract Number:</b> <b>CON-208</b>
<b>Project Start Date:</b> <b>1/10/2018</b>	<b>Project Completion Date:</b> <b>4/10/2020</b>	<b>Contract Amount:</b> <b>\$ 6,110,000.00</b>
<b>Invoiced to Date: \$4,249,148.75</b>	<b>Balance Remaining: \$1,830,851.25</b>	
<b>CURRENT WORK STATUS</b>		<p>Phase 2 demolition in chlorine storage room of evaporators and all process piping began on Tuesday February 12<sup>th</sup> and is still in progress.</p> <p>New equipment to be installed during Phase 2 consists of (3) evaporators, chlorine gas header piping and processing equipment.</p> <p>The Waterworks Park North and South pre-chlorination and post-chlorination feeds have been completed with all chlorine solution conduits routed to the north and south filter along with wash water. All phase 2 chlorinators in chlorine feed room have been installed and are in the process of being commissioned over the next few weeks.</p> <p>New duct fans and ductwork have been installed in the electrical and control rooms.</p>
<b>PROJECT SCHEDULE</b> (% complete)		68% elapsed time from Notice to Proceed
<b>PROJECT PROJECTIONS</b>		<p>All HVAC work for the chlorine feed, storage and control rooms is tentatively scheduled to be completed no later than May 1, 2019. Electrical work for both process equipment and HVAC is ongoing and is working simultaneously with all trades. All electrical will continue through June 2019.</p> <p>The new Ovation control system is ongoing and being implemented by Emerson. It will continue through June 2019.</p>





**New Cooling Central Air System in Electrical Room**



**Installation of new HVAC Ductwork in chlorine Storage Room**





**New HVAC duct fan unit Control Room**



**Demolition for Phase 2 Underway**



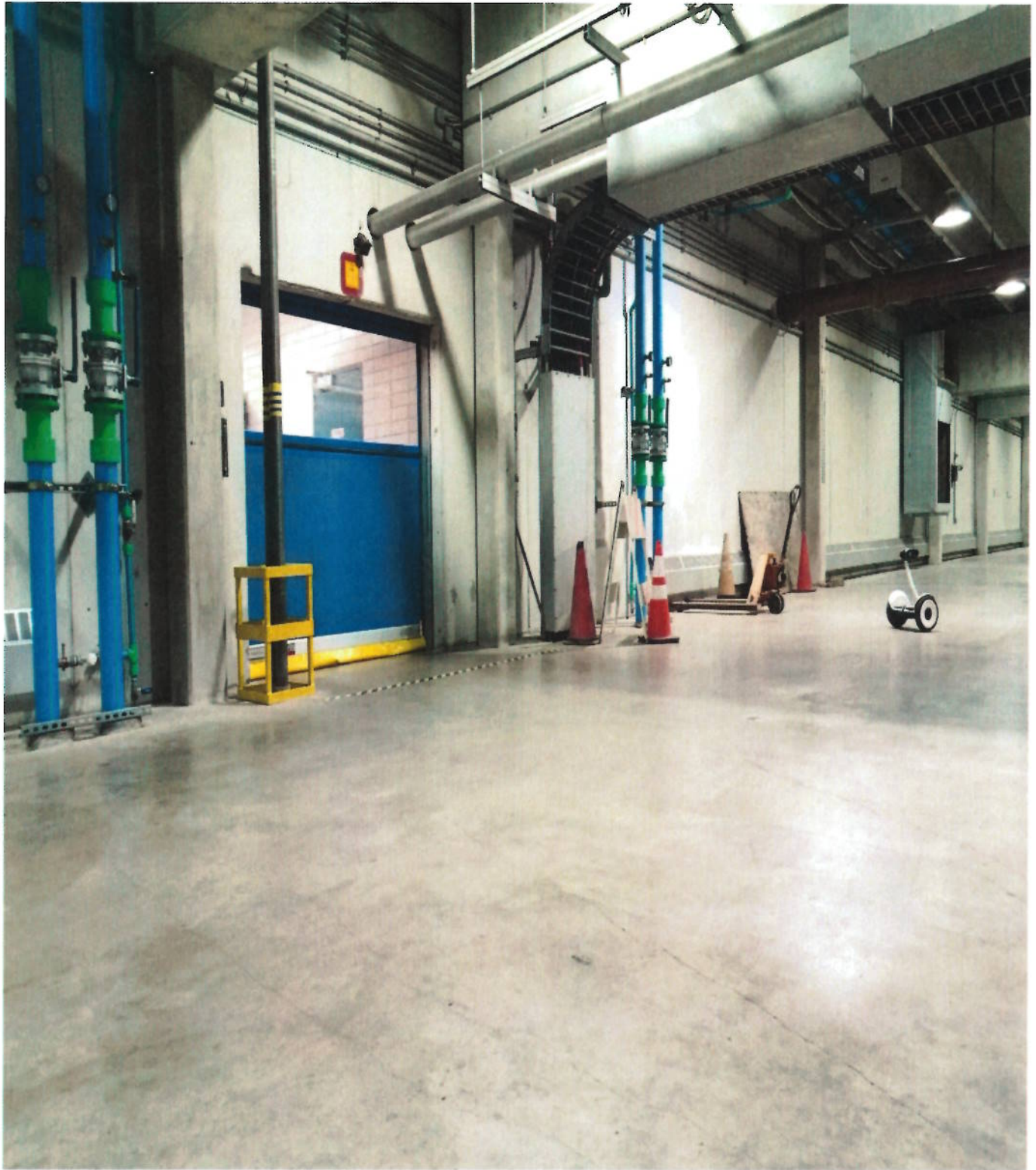
## Active Project Spotlight

<b>Project Name: Lake Huron Water Treatment Plant Miscellaneous Mechanical Heating, Ventilating and Air-Conditioning System Improvements</b>		
<b>GLWA Project Manager:</b> <b>Brian VanHall</b>	<b>Contractor:</b> <b>Detroit Contracting Inc</b>	<b>Contract Number:</b> <b>CON-212</b>
<b>Project Start Date:</b> <b>2/14/2018</b>	<b>Project Completion Date:</b> <b>5/14/2020</b>	<b>Contract Amount:</b> <b>\$7,660,000.00</b>
<b>Invoiced to Date:</b> <b>\$4,505,891.15</b>	<b>Balance Remaining:</b> <b>\$3,154,108.85</b>	
<b>CURRENT WORK STATUS</b>	New heating and ventilation system equipment is being installed in the filter pipe and operating galleries. This work is now complete in the high-lift pumping building. New air conditioning and ventilation equipment has been installed in the variable frequency drive (VFD) and electrical rooms. Two of the five new roll-up doors have been installed in the process buildings.	
<b>PROJECT SCHEDULE</b> (% complete)	67% elapsed time from the notice to proceed	
<b>PROJECT PROJECTIONS</b>	In the next few weeks, the final 3 roll-up doors will be installed. Work on the filter gallery stairwells will continue. The new equipment in the chlorine room will be tied into the control system.	



**New Hydronic Piping**



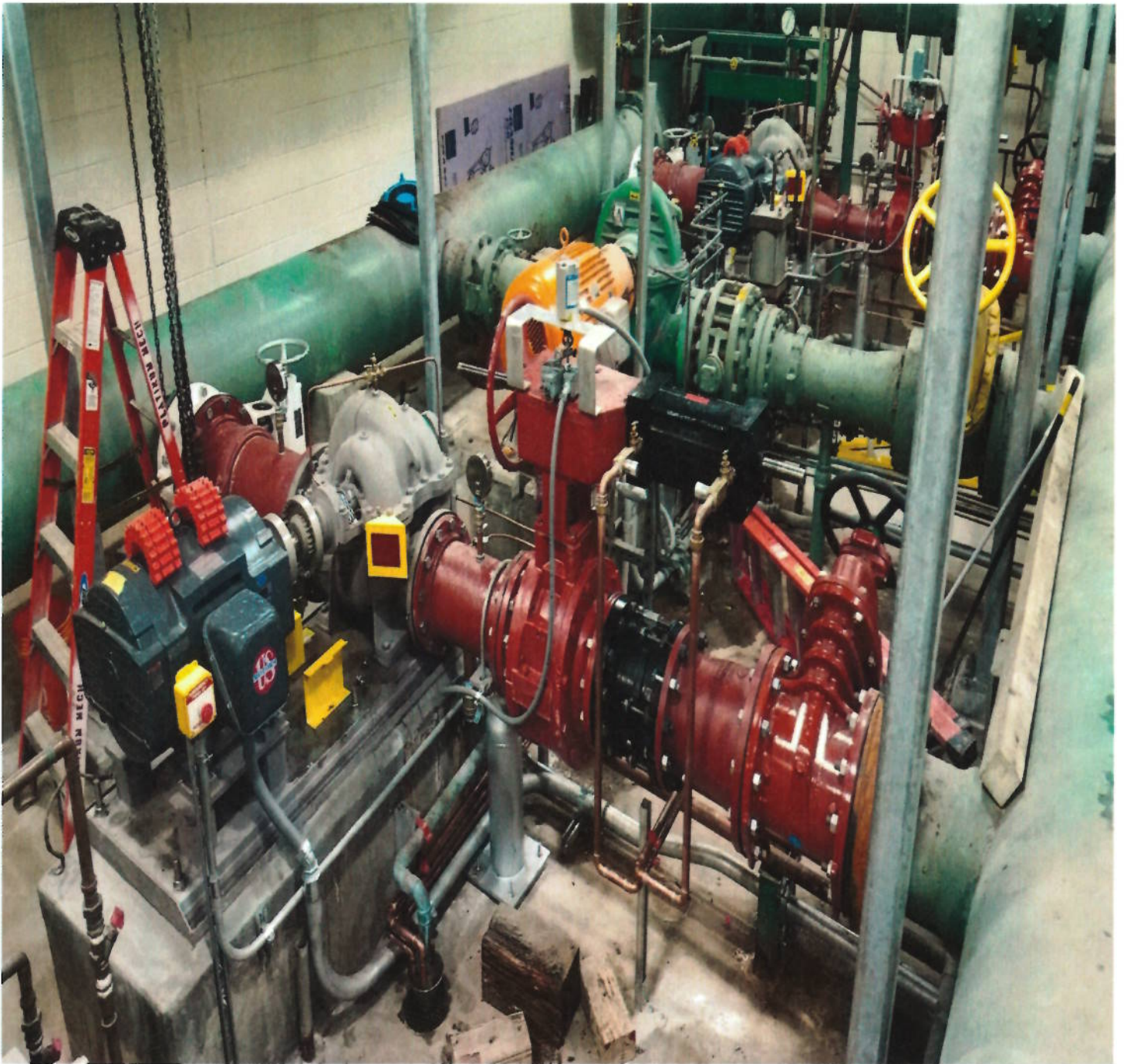


**Installation of New Roll-Up Doors**



### Active Project Spotlight

<b>Project Name: Orion Pumping Station Improvements</b>		
<b>GLWA Project Manager:</b> <b>Jorge Nicolas</b>	<b>Contractor:</b> <b>Detroit Contracting, Inc.</b>	<b>Contract Number:</b> <b>CON-225</b>
<b>Project Start Date:</b> <b>1/9/2018</b>	<b>Project Completion Date:</b> <b>7/26/2019</b>	<b>Contract Amount:</b> <b>\$1,747,000.00</b>
<b>Invoiced to Date:</b> <b>\$1,242,083.00</b>	<b>Balance Remaining:</b> <b>\$504,916.57</b>	
<b>CURRENT WORK STATUS</b>		Kennedy Industries has completed aligning Pump & Motor L-1 and then moved over to align Pump & Motor L-3. Platinum Mechanical is setting the timing / speed for the new ball valve actuators – Speed set to 1 Minute. The new piping and valves were disinfected & passed bacteria testing performed by GLWA Water Quality. Pump/Motor sets L-1 and L-3 are operating and are in the field acceptance testing period to confirm if they are meeting the performance requirements specified in the Contract.
<b>PROJECT SCHEDULE</b>		
(% complete)		75% elapsed time from Notice to Proceed
<b>PROJECT PROJECTIONS</b>		Field acceptance testing of Pump/Motor sets L-1 and L3 are scheduled to be completed mid-March 2019. If they pass the testing, then work will proceed on replacing Pump/Motor sets L-2 and L-4, which is schedule for mid-March through mid-April 2019 inclusive of all field acceptance testing.



**Orion Station - New Pumps, Motors and Related Piping**

## Active Project Spotlight

<b>Project Name: Southwest Water Treatment Plant Phosphoric Acid and Chlorine System Improvements</b>		
<b>GLWA Project Manager:</b> <b>Shakil Ahmed</b>	<b>Contractor:</b> <b>Weiss Construction Co</b>	<b>Contract Number:</b> <b>CON-248</b>
<b>Project Start Date:</b> <b>5/1/2018</b>	<b>Project Completion Date:</b> <b>1/6/2019</b>	<b>Contract Amount:</b> <b>\$406,975.00</b>
<b>Invoiced to Date: \$348,713.00</b>	<b>Balance Remaining: \$58,262.00</b>	
<b>CURRENT WORK IN PROGRESS</b>		The new phosphoric acid feed system, including new piping, valves, metering pumping, mechanical accessories, electrical, instrumentation, and controls have been installed and are in satisfactory service. The chlorine header isolation valves have also been replaced with new.
<b>PROJECT SCHEDULE</b> (% complete)		96% elapsed time from the Notice to Proceed
<b>PROJECT PROJECTIONS</b>		The project is substantially complete with the final contract closeout activities involving submittal of final O&M manuals, final waivers, consent of surety to final payment, etc. being processed.





**New Feed System Instrumentation, Controls and Restored Concrete**



**New Phosphoric Acid Piping**

## Active Project Spotlight

<b>Project Name: Springwells Water Treatment Plant 1958 Rapid Mix Improvements</b>		
<b>GLWA Project Manager:</b> <b>Pete Fromm</b>	<b>Contractor:</b> <b>J.F. Cavanaugh Company</b>	<b>Contract Number:</b> <b>CON-251</b>
<b>Project Start Date:</b> <b>5/15/2018</b>	<b>Project Completion Date:</b> <b>July 14, 2019</b>	<b>Contract Amount:</b> <b>\$ 803,647.00</b>
<b>Invoiced to Date: \$457,373.06</b>	<b>Balance Remaining: \$346,273.94</b>	
<b>CURRENT WORK STATUS</b>	New rapid mixing units RM-1A and RM- 1B are installed and are in satisfactory service. Units are equipped with new motors, gear drive units, bases, accessories, and are powered by new dedicated switchgear in the 1958 Rapid Mix Building. Staff O&M training on the new mixers and electrical gear was provided in February.	
<b>PROJECT SCHEDULE</b> (% complete)	60% elapsed time from Notice to Proceed	
<b>PROJECT PROJECTIONS</b>	Restoration of existing Terrazzo is scheduled for March 2019. New O&M manuals will also be delivered to the plant in March 2019.	





**New Base Plate Placed on New Curb of RM-1A**



**New Mixing Unit RM-2A**



## Active Project Spotlight

Project Name: <b>Springwells Water Treatment Plant Reservoir Fill Line Improvements</b>		
GLWA Project Manager: <b>Erich Klun</b>	Contractor: <b>Ric-Man Construction</b>	Contract Number: <b>CON-253</b>
Project Start Date: <b>4/20/2018</b>	Project Completion Date: <b>7/19/2019</b>	Contract Amount: <b>\$4,270,500.00</b>
Invoiced to Date: <b>\$485,076.67</b>	Balance Remaining: <b>\$3,785,423.33</b>	
<b>CURRENT WORK STATUS</b>		The new reinforced concrete valve vault that will enclose the new energy-dissipating valve is constructed. The new energy-dissipating valve (a plunger valve) is in manufacturing. Once the valve is delivered to the site, it will be installed and prepared for service and field acceptance testing.
<b>PROJECT SCHEDULE</b> (% complete)		40% elapsed time from the Notice to Proceed
<b>PROJECT PROJECTIONS</b>		New piping and the energy dissipating valve is scheduled for delivery to the site by May 2019.



**Pumping Concrete into Valve Vault wall forms**



**New Valve Vault Walls**

## Active Project Spotlight

Project Name: <b>Lake Huron Water Treatment Plant Electrical Tunnel Rehabilitation</b>		
GLWA Project Manager: <b>Jorge Nicolas</b>	Contractor: <b>Clark Construction</b>	Contract Number: <b>CON-288</b>
Project Start Date: <b>9/24/2018</b>	Project Completion Date: <b>9/25/2019</b>	Contract Amount: <b>\$ 3,888,000.00</b>
Invoiced to Date: <b>\$1,201,232.30</b>	Balance Remaining: <b>\$2,686,767.70</b>	
<b>CURRENT WORK IN PROGRESS</b>	Transformer #2 is completed and turned over to plant. Currently working on transformer #1. Continuing work on new stairwell at the end of tunnel near the transformer yard. Completed new LED lighting in tunnel	
<b>PROJECT SCHEDULE</b> (% complete)	38% elapsed time from Notice to Proceed	
<b>PROJECT PROJECTIONS</b>	Continue to remove cable in tunnel Continue work on new stairwell Continue with concrete replacement in tunnel	





**Connecting ground wires at Transformer #2**



**Continuing to remove old cable in tunnel**

### Active Project Spotlight

**PROJECT NAME: Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facility Improvements**

**GLWA Project Manager:**  
**Khader Hamad**

**Contractor:**  
**Walsh Construction**

**Contract Number:**  
**SP-563**

**Project Start Date:**  
**7/8/2013**

**Project Completion Date:**  
**12/31/2018**

**Contract Amount:**  
**\$75,899,000.00**

**Invoiced to Date:**  
**\$67,640,697.27**

**Balance Remaining:**  
**\$ 8,258,302.73**

#### **CURRENT WORK STATUS**

All 40 of the 1958 filters are rehabilitated and are in service. The 19 filters in the 1930 filter building are re-built and are in service. Work continues on filter control system hardware upgrades and software programming. The new phosphoric acid feed metering pumps are installed and in service. The phosphoric acid piping had to be re-built however due to leaks. The new piping is installed and being monitored to determine if satisfactory. Work continues on relocating the electrical switchgear, rebuilding the laboratory and finishing offices in the administration building.

#### **PROJECT SCHEDULE (% complete)**

86% elapsed time since Notice to Proceed

#### **PROJECT PROJECTIONS**

Work will continue on the phosphoric acid chemical piping testing. The new vertical turbine pump for the high-pressure water system is scheduled for installation in March 2019.





**New Phosphoric Acid Metering Pump (Typical)**





**Architectural Restoration Work Springwells Water Treatment Plant**